

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A mutated alkaline cellulase which is obtained by deleting, from a cellulase ~~having an~~ having the amino acid sequence ~~represented by~~ of SEQ ID NO: 2 ~~or an~~ or a homologous amino acid sequence exhibiting at least ~~90%~~ 95% homology therewith, a peptide consisting of one or more amino acid residues chosen from the 343rd to 377th positions in SEQ ID NO: 2 or from corresponding positions of said homologous amino acid sequence and ~~inserting a~~ replacing the peptide with an insertion peptide having 2 to 15 amino acid residues, wherein said mutated alkaline cellulase has alkaline cellulase activity into at least one of the deleted positions.

2. (Currently Amended) The mutated alkaline cellulase according to claim 1, which is obtained by deleting a peptide consisting of one or more amino acid residues chosen from the 357th to 362nd positions of SEQ ID NO: 2 or from corresponding positions of said homologous amino acid sequence and ~~inserting a~~ replacing the peptide with an insertion peptide having 2 to 5 amino acid residues ~~into at least one of the deleted positions.~~

3. (Currently Amended) The mutated alkaline cellulase as described in claim 1, which is obtained by deleting a peptide consisting of all of the amino acid residues from the 357th to 362nd positions of SEQ ID NO: 2 or from corresponding positions of said homologous amino acid sequence and ~~inserting a~~ replacing the peptide with an insertion peptide having 3 amino acid residues ~~into the deleted positions.~~

4. (Currently Amended) The mutated alkaline cellulase as described in claim 1, wherein ~~the peptide to be inserted~~ said insertion peptide contains as structural amino acid residues thereof, alanine and glycine, alanine and histidine, or alanine and arginine.

5. (Currently Amended) The mutated alkaline cellulase as described in claim 1, wherein ~~the peptide to be inserted~~ said insertion peptide is selected from the group consisting of alanine-glycine-alanine, alanine-histidine-alanine, ~~or~~ and alanine-arginine-alanine.

6. (Previously Presented) A gene encoding a mutated alkaline cellulase as recited in claim 1.

7. (Original) A recombinant vector comprising a gene as recited in claim 6.

8. (Currently Amended) ~~A transformant~~ An isolated transformed microorganism comprising a recombinant vector as recited in claim 7.

9. (Canceled)

10. (New) A method for producing a mutated alkaline cellulase, which comprises culturing the isolated transformed microorganism of claim 8 in a medium for a time and under conditions suitable to produce and accumulate said mutated alkaline cellulase, and isolating said mutated alkaline cellulase.

11. (New) The mutated alkaline cellulase as described in claim 1, wherein the homologous amino acid sequence exhibits at least 98% homology to the amino acid sequence of SEQ ID NO: 2.

12. (New) The mutated alkaline cellulase according to claim 11, which is obtained by deleting a peptide consisting of one or more amino acid residues chosen from the 357th to 362nd positions of SEQ ID NO: 2 or from corresponding positions of said homologous amino acid sequence and replacing the peptide with an insertion peptide having 2 to 5 amino acid residues.

13. (New) The mutated alkaline cellulase as described in claim 11, which is obtained by deleting a peptide consisting of all of the amino acid residues from the 357th to 362nd positions of SEQ ID NO: 2 or from corresponding positions of said homologous amino acid sequence and replacing the peptide with an insertion peptide having 3 amino acid residues.

14. (New) A mutated alkaline cellulase which is obtained by deleting, from a cellulase selected from the group consisting of SEQ ID NO: 7, SEQ ID NO: 8, and SEQ ID NO: 9, a peptide consisting of one or more amino acid residues chosen from the positions corresponding to the 343rd to 377th positions of SEQ ID NO: 2, and replacing the peptide with an insertion peptide having 2 to 15 amino acid residues, wherein said mutated alkaline cellulase has alkaline cellulase activity.

15. (New) The mutated alkaline cellulase according to claim 14, which is obtained by deleting a peptide consisting of one or more amino acid residues chosen from the positions

corresponding to the 357th to 362nd positions of SEQ ID NO: 2 and replacing the peptide with an insertion peptide having 2 to 5 amino acid residues.

16. (New) The mutated alkaline cellulase as described in claim 14, which is obtained by deleting a peptide consisting of all of the amino acid residues chosen from the positions corresponding to the 357th to 362nd positions of SEQ ID NO: 2 and replacing the peptide with an insertion peptide having 3 amino acid residues.

17. (New) The mutated alkaline cellulase as described in claim 14, wherein said insertion peptide contains as structural amino acid residues thereof, alanine and glycine, alanine and histidine, or alanine and arginine.

18. (New) The mutated alkaline cellulase as described in claim 14, wherein said insertion peptide is selected from the group consisting of alanine-glycine-alanine, alanine-histidine-alanine, and alanine-arginine-alanine.

19. (New) A gene encoding a mutated alkaline cellulase as recited in claim 14.

20. (New) A recombinant vector comprising a gene as recited in claim 19.

21. (New) An isolated transformed microorganism comprising a recombinant vector as recited in claim 20.

22. (New) A method for producing a mutated alkaline cellulase, which comprises culturing the isolated transformed microorganism of claim 21 in a medium for a time and under conditions suitable to produce and accumulate said mutated alkaline cellulase, and isolating said mutated alkaline cellulase.

SUPPORT FOR THE AMENDMENTS

Claim 9 has been canceled.

Claims 1-5 and 8 have been amended.

Claims 10-22 have been added.

The amendment of Claims 1-5 and 8 find support in the corresponding claims as originally filed. Additional support for the amendment of Claims 1 and 8, as well as the introduction of Claims 10-22, is provided by the specification as originally filed, for example at page 5, lines 9-16, page 8, line 4 to page 19, line 12. New Claims 14-22 are further supported by page 7, line 18 to page 8, line 3.

No new matter has been added by the present amendment.